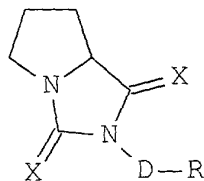


We claim:

1. A compound of the formula:



5 where

each X independently is O, S, or NR₂;

R₂ is selected from the group consisting of
cyano, nitro, hydrogen, C₁-C₄ alkyl, hydroxy,
and C₁-C₄ alkoxy;

10 D is a direct bond or a C₁-C₈ alkyl or alkenyl;

R is selected from the group consisting of
hydrogen, phenyl, biphenyl, cyclopropyl,
cyclobutyl, cyclopentyl, cycloheptyl,
cyclooctyl, naphthyl, 1,2,3,4-
15 tetrahydronaphthyl, indenyl, azulenyl,
fluorenyl, anthracenyl, isoindolyl, indolinyl,
benzofuranyl, benzothiophenyl, indazolyl,
benzimidazolyl, tetrahydrofuranyl,
tetrahydropyranyl, pyridyl, pyrrolyl,
20 pyrrolidinyl, pyridinyl, pyrimidinyl, purinyl,
quinolinyl, isoquinolinyl,
tetrahydroquinolinyl, quinolizinyl, furyl,
benzofuranyl, thiophenyl, imidazolyl,
oxazolyl, benzoxazolyl, benzoxazinyl,
25 thiazolyl, isoxazolyl, isotriazolyl,
oxadiazolyl, triazolyl, thiadiazolyl,
pyridazinyl, pyrimidinyl, pyrazinyl,
triazinyl, trithianyl, indolizinyl, pyrazolyl,
pyrazolinyl, pyrazolidinyl, benzopyranyl,
30 thienyl, tetrahydroisoquinolinyl, cinnolinyl,
phthalazinyl, quinazolinyl, quinoxalinyl,
naphthyridinyl, pteridinyl, carbazolyl,

phenaziny, phenothiaziny, phenoxaziny, and
adamantyl;

wherein R may be optionally substituted with one
substituent which is selected from the group
5 consisting of hydrogen, halo, hydroxyl, nitro,
trifluoromethyl, C₁-C₆ straight or branched chain
alkyl, C₂-C₆ straight or branched chain alkenyl, C₁-
C₄ alkoxy, C₂-C₄ alkenyloxy, phenyl, phenoxy,
benzyloxy, and amino;

10 or a pharmaceutically acceptable salt, ester, or solvate
thereof;

wherein when R is hydrogen, D is a C₅-C₇ alkyl or C₅-
C₈ alkenyl;

wherein when R is phenyl and D is a bond, R must be
15 substituted with phenyl, hydroxyl, trifluoromethyl, C₂-C₆
straight or branched chain alkyl or alkenyl, C₃-C₄ alkoxy
or C₂-C₄ alkenyloxy, phenoxy, or benzyloxy;

wherein when R is 4-trifluoromethylphenyl, both X
substituents must be O.

20 2. The compound according to claim 1 that is
selected from the group consisting of:

(7aS)-2-(1-Naphthyl)perhydropyrrolo[1,2-
c]imidazole-1,3-dione,

(7aS)-2-(2'-Phenyl)phenylperhydropyrrolo[1,2-
25 c]imidazole-1,3-dione,

(7aS)-2-(4-(Trifluoromethyl)phenyl)perhydropyrrolo
[1,2-c]imidazole-1,3-dione,

2-benzyl-3-thioxo-2,5,6,7,7a-pentahydro-2-
azapyrrolizin-1-one,

30 2-hexyl-2,5,6,7,7a-pentahydro-2-azapyrrolizine-1,3-
dione,

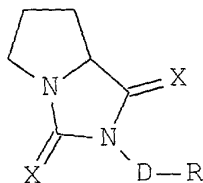
2-(2-ethyl)phenyl-2,5,6,7,7a-pentahydro-2-
azapyrrolizin-1,3-dione,

2-(3-phenylpropyl)-3-thioxo-2,5,6,7,7a-pentahydro-

2-azapyrrolizin-1-one, and

2-(2-phenylethyl)-3-thioxo-2,5,6,7,7a-pentahydro-2-azapyrrolizin-1-one.

3. A pharmaceutical composition comprising an effective amount of a compound and a pharmaceutically acceptable carrier, wherein the compound is of the formula:



where

- each X independently is O, S, or NR₂;
R₂ is selected from the group consisting of cyano, nitro, hydrogen, C₁-C₄ alkyl, hydroxy, and C₁-C₄ alkoxy;
D is a direct bond or C₁-C₈ alkyl or alkenyl;
R is hydrogen, or an alicyclic or aromatic, mono-, bi- or tricyclic, carbo- or heterocyclic ring;
wherein R is optionally substituted with one substituent selected from the group consisting of hydrogen, halo, hydroxyl, nitro, trifluoromethyl, C₁-C₆ straight or branched chain alkyl, C₂-C₆ straight or branched chain alkenyl, C₁-C₄ alkoxy, C₂-C₄ alkenyloxy, phenyl, phenoxy, benzyloxy, and amino;
or a pharmaceutically acceptable salt, ester, or solvate thereof.

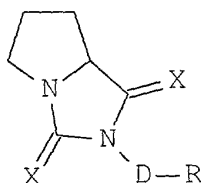
4. The pharmaceutical composition of claim 3, further comprising an additional neurotrophic factor.

5. The pharmaceutical composition of claim 4, wherein the additional neurotrophic factor is selected from the group consisting of neurotrophic growth factor, brain derived growth factor, glial derived growth

factor, ciliary neurotrophic factor, insulin growth factor and active truncated derivatives thereof, acidic fibroblast growth factor, basic fibroblast growth factor, platelet-derived growth factors, neurotrophin-3, and neurotrophin-4/5.

6. A method of treating a neurological disorder in an animal, comprising:

administering to the animal an effective amount of a compound to stimulate growth of damaged peripheral nerves or to promote neuronal regeneration, wherein the compound is of the formula:



where

each X independently is O, S, or NR₂;

R₂ is selected from the group consisting of cyano, nitro, hydrogen, C₁-C₄ alkyl, hydroxy, and C₁-C₄ alkoxy;

D is a direct bond or C₁-C₈ alkyl or alkenyl;

R is hydrogen, or an alicyclic or aromatic, mono-, bi- or tricyclic, carbo- or heterocyclic ring;

wherein R is optionally substituted with one substituent selected from the group consisting of hydrogen, halo, hydroxyl, nitro, trifluoromethyl,

C₁-C₆ straight or branched chain alkyl, C₂-C₆ straight or branched chain alkenyl, C₁-C₄ alkoxy, C₂-C₄ alkenyloxy, phenyl, phenoxy, benzyloxy, and amino;

or a pharmaceutically acceptable salt, ester, or solvate thereof.

7. The method of claim 6, wherein the neurological disorder is selected from the group consisting of

peripheral neuropathies caused by physical injury or
disease state, physical damage to the brain, physical
damage to the spinal cord, stroke associated with brain
damage, and neurological disorders relating to
5 neurodegeneration.

8. The method of claim 6, wherein the neurological
disorder is selected from the group consisting of
Alzheimer's Disease, Parkinson's Disease, amyotrophic
lateral sclerosis, and Huntington's Disease.

10 9. The method of claim 6, wherein the neurological
disorder is Alzheimer's Disease.

10. The method of claim 6, wherein the
neurological disorder is Parkinson's Disease.

15 11. The method of claim 6, wherein the
neurological disorder is amyotrophic lateral sclerosis.

12. The method of claim 6, wherein the
neurological disorder is Huntington's Disease.

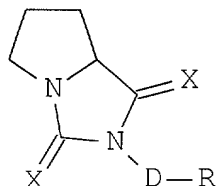
13. The method of claim 6, wherein the compound is
non-immunosuppressive.

20 14. The method of claim 6, further comprising
administering an additional neurotrophic factor.

15. The method of claim 14, wherein the additional
neurotrophic factor is selected from the group
consisting of neurotrophic growth factor, brain derived
25 growth factor, glial derived growth factor, ciliary
neurotrophic factor, insulin growth factor and active
truncated derivatives thereof, acidic fibroblast growth
factor, basic fibroblast growth factor, platelet-derived
growth factors, neurotrophin-3, and neurotrophin-4/5.

30 16. A method of stimulating growth of damaged
peripheral nerves, comprising:

administering to damaged peripheral nerves an
effective amount of a compound to stimulate or promote
growth of the damaged peripheral nerves, wherein the
35 compound is of the formula:



where

each X independently is O, S, or NR₂;

5 R₂ is selected from the group consisting of
cyano, nitro, hydrogen, C₁-C₄ alkyl, hydroxy,
and C₁-C₄ alkoxy;

D is a direct bond or C₁-C₈ alkyl or alkenyl;

10 R is hydrogen, or an alicyclic or aromatic,
mono-, bi- or tricyclic, carbo- or
heterocyclic ring;

wherein R is optionally substituted with one
substituent selected from the group consisting of
hydrogen, halo, hydroxyl, nitro, trifluoromethyl,
15 C₁-C₆ straight or branched chain alkyl, C₂-C₆
straight or branched chain alkenyl, C₁-C₄ alkoxy, C₂-
C₄ alkenyloxy, phenyl, phenoxy, benzyloxy, and
amino;

or a pharmaceutically acceptable salt, ester, or solvate
thereof.

20 17. The method of claim 16, wherein the compound
is non-immunosuppressive.

18. The method of claim 16, further comprising
administering an additional neurotrophic factor.

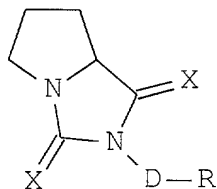
25 19. The method of claim 18, wherein the additional
neurotrophic factor is selected from the group
consisting of neurotrophic growth factor, brain derived
growth factor, glial derived growth factor, ciliary
neurotrophic factor, insulin growth factor and active
truncated derivatives thereof, acidic fibroblast growth
30 factor, basic fibroblast growth factor, platelet-derived
growth factors, neurotrophin-3, and neurotrophin-4/5.

20. A method for promoting neuronal regeneration

and growth in animals, comprising:

administering to an animal an effective amount of a compound to promote neuronal regeneration, wherein the compound is of the formula:

5



where

each X independently is O, S, or NR₂;

R₂ is selected from the group consisting of cyano, nitro, hydrogen, C₁-C₄ alkyl, hydroxy, and C₁-C₄ alkoxy;

D is a direct bond or C₁-C₈ alkyl or alkenyl;

R is hydrogen, or an alicyclic or aromatic, mono-, bi- or tricyclic, carbo- or heterocyclic ring;

wherein R is optionally substituted with one substituent selected from the group consisting of hydrogen, halo, hydroxyl, nitro, trifluoromethyl, C₁-C₆ straight or branched chain alkyl, C₂-C₆ straight or branched chain alkenyl, C₁-C₄ alkoxy, C₂-C₄ alkenyloxy, phenyl, phenoxy, benzyloxy, and amino;

or a pharmaceutically acceptable salt, ester, or solvate thereof.

21. The method of claim 20, wherein the compound is non-immunosuppressive.

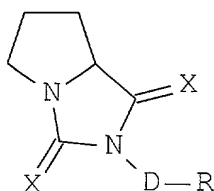
22. The method of claim 20, further comprising administering an additional neurotrophic factor.

23. The method of claim 22, wherein the additional neurotrophic factor is selected from the group consisting of neurotrophic growth factor, brain derived growth factor, glial derived growth factor, ciliary neurotrophic factor, insulin growth factor and active

truncated derivatives thereof, acidic fibroblast growth factor, basic fibroblast growth factor, platelet-derived growth factors, neurotrophin-3, and neurotrophin-4/5.

24. A method for preventing neurodegeneration in
5 an animal, comprising:

administering to an animal an effective amount of a compound to prevent neurodegeneration, wherein the compound is of the formula:



10 where

each X independently is O, S, or NR₂;

R₂ is selected from the group consisting of cyano, nitro, hydrogen, C₁-C₄ alkyl, hydroxy, and C₁-C₄ alkoxy;

15 D is a direct bond or C₁-C₈ alkyl or alkenyl;

R is hydrogen, or an alicyclic or aromatic, mono-, bi- or tricyclic, carbo- or heterocyclic ring;

wherein R is optionally substituted with one
20 substituent selected from the group consisting of hydrogen, halo, hydroxyl, nitro, trifluoromethyl, C₁-C₆ straight or branched chain alkyl, C₂-C₆ straight or branched chain alkenyl, C₁-C₄ alkoxy, C₂-C₄ alkenyloxy, phenyl, phenoxy, benzyloxy, and
25 amino;

or a pharmaceutically acceptable salt, ester, or solvate thereof.

25. The method of claim 24, wherein the neurodegeneration is Alzheimer's Disease.

30 26. The method of claim 24, wherein the neurodegeneration is Parkinson's Disease.

27. The method of claim 24, wherein the

neurodegeneration is amyotrophic lateral sclerosis.

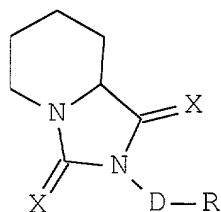
28. The method of claim 24, wherein the neurodegeneration is Huntington's Disease.

29. The method of claim 24, wherein the compound
5 is non-immunosuppressive.

30. The method of claim 24, further comprising administering an additional neurotrophic factor.

31. The method of claim 30, wherein the additional
10 neurotrophic factor is selected from the group consisting of neurotrophic growth factor, brain derived growth factor, glial derived growth factor, ciliary neurotrophic factor, insulin growth factor and active truncated derivatives thereof, acidic fibroblast growth factor, basic fibroblast growth factor, platelet-derived
15 growth factors, neurotrophin-3, and neurotrophin-4/5.

32. A compound of the formula:



where

each X independently is O, S, or NR₂;

20 R₂ is selected from the group consisting of cyano, nitro, hydrogen, C₁-C₄ alkyl, hydroxy, and C₁-C₄ alkoxy;

D is a direct bond or a C₁-C₈ alkyl or alkenyl;

R
25 is selected from the group consisting of hydrogen, phenyl, biphenyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl, cyclooctyl, 1,2,3,4-tetrahydronaphthyl, indenyl, azulenyl, fluorenyl, anthracenyl, indolyl, isoindolyl,
30 indolinyl, benzofuranyl, benzothiophenyl, indazolyl, benzimidazolyl, tetrahydrofuranyl,

5 tetrahydropyranyl, pyridyl, pyrrolyl,
pyrrolidinyl, pyridinyl, pyrimidinyl, purinyl,
quinolinyl, isoquinolinyl,
tetrahydroquinolinyl, quinolizinyl, furyl,
thiophenyl, imidazolyl, oxazolyl,
benzopyranyl, thiazolyl, isotriazolyl,
oxadiazolyl, triazolyl, thiadiazolyl,
pyridazinyl, pyrimidinyl, pyrazinyl,
10 triazinyl, trithianyl, indolizinyl, pyrazolyl,
pyrazolinyl, pyrazolidinyl, thienyl,
tetrahydroisoquinolinyl, cinnolinyl,
phthalazinyl, quinazolinyl, naphthyridinyl,
pteridinyl, carbazolyl, acridinyl, phenazinyl,
phenothiazinyl, phenoxazinyl, and adamantyl;

15 wherein R may be optionally substituted with one
substituent which is selected from the group
consisting of hydrogen, halo, hydroxyl, nitro,
trifluoromethyl, C₁-C₆ straight or branched chain
alkyl, C₂-C₆ straight or branched chain alkenyl, C₁-
20 C₄ alkoxy, C₂-C₄ alkenyloxy, phenyl, phenoxy,
benzyloxy, and amino;

or a pharmaceutically acceptable salt, ester, or solvate
thereof;

25 wherein when R is hydrogen, D is a C₅-C₈ alkyl or
alkenyl;

wherein when R is phenyl and D is a bond, R must be
substituted with C₂-C₃ or C₅-C₆ straight or branched chain
alkyl or alkenyl, C₃-C₄ alkoxy or C₂-C₄ alkenyloxy,
phenyl, phenoxy, benzyloxy, or amino.

30 33. The compound according to claim 32 that is
selected from the group consisting of:

2-Benzyl-2,5,6,7,8,8a-hexahydro-2-azaindolizine-
1,3-dione,

35 2-benzyl-3-thioxo-2,5,6,7,8,8a-hexahydro-2-
azaindolizin-1-one,

2-(2-phenylethyl)-3-thioxo-2,5,6,7,8,8a-hexahydro-
2-azaindolizine-1-one,

2-Heptyl-2,5,6,7,8,8a-hexahydro-2-azaindolizine-
1,3-dione,

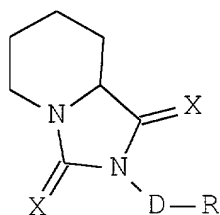
5 2-Octyl-2,5,6,7,8,8a-hexahydro-2-azaindolizine-1,3-
dione,

2-(3-phenylpropyl)-3-thioxo-2,5,6,7,8,8a-hexahydro-
2-azaindolizine-1-one,

10 2-hexyl-2,5,6,7,8,8a-hexahydro-2-azaindolizine-1,3-
dione, and

2-Cyclohexyl-2,5,6,7,8,8a-hexahydro-2-
azaindolizine-1,3-dione.

34. A pharmaceutical composition comprising an
effective amount of a compound and a pharmaceutically
15 acceptable carrier, wherein the compound is of the
formula:



where

- each X independently is O, S, or NR₂;
- 20 R₂ is selected from the group consisting of
 cyano, nitro, hydrogen, C₁-C₄ alkyl, hydroxy,
 and C₁-C₄ alkoxy;
- D is a direct bond or C₁-C₆ alkyl or alkenyl;
- R is hydrogen, or an alicyclic or aromatic,
25 mono-, bi- or tricyclic, carbo- or
 heterocyclic ring;
- wherein R is optionally substituted with one
 substituent selected from the group consisting of
 hydrogen, halo, hydroxyl, nitro, trifluoromethyl,
30 C₁-C₆ straight or branched chain alkyl, C₂-C₆
 straight or branched chain alkenyl, C₁-C₄ alkoxy, C₂-

C₄ alkenyloxy, phenyl, phenoxy, benzyloxy, and amino;

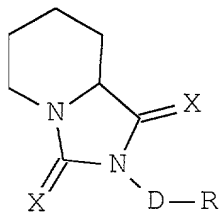
or a pharmaceutically acceptable salt, ester, or solvate thereof.

5 35. The pharmaceutical composition of claim 34, further comprising an additional neurotrophic factor.

36. The pharmaceutical composition of claim 35, wherein the additional neurotrophic factor is selected from the group consisting of neurotrophic growth factor,
10 brain derived growth factor, glial derived growth factor, ciliary neurotrophic factor, insulin growth factor and active truncated derivatives thereof, acidic fibroblast growth factor, basic fibroblast growth factor, platelet-derived growth factors, neurotrophin-3,
15 and neurotrophin-4/5.

37. A method of treating a neurological disorder in an animal, comprising:

administering to the animal an effective amount of a compound to stimulate growth of damaged peripheral
20 nerves or to promote neuronal regeneration, wherein the compound is of the formula:



where

each X independently is O, S, or NR₂;
25 R₂ is selected from the group consisting of cyano, nitro, hydrogen, C₁-C₄ alkyl, hydroxy, and C₁-C₄ alkoxy;
D is a direct bond or C₁-C₈ alkyl or alkenyl;
R is hydrogen, or an alicyclic or aromatic,
30 mono-, bi- or tricyclic, carbo- or heterocyclic ring;

wherein R is optionally substituted with one
substituent selected from the group consisting of
hydrogen, halo, hydroxyl, nitro, trifluoromethyl,
C₁-C₆ straight or branched chain alkyl, C₂-C₆
5 straight or branched chain alkenyl, C₁-C₄ alkoxy, C₂-
C₄ alkenyloxy, phenyl, phenoxy, benzyloxy, and
amino;

or a pharmaceutically acceptable salt, ester, or solvate
thereof.

10 38. The method of claim 37, wherein the
neurological disorder is selected from the group
consisting of peripheral neuropathies caused by physical
injury or disease state, physical damage to the brain,
physical damage to the spinal cord, stroke associated
15 with brain damage, and neurological disorders relating
to neurodegeneration.

39. The method of claim 37, wherein the
neurological disorder is selected from the group
consisting of Alzheimer's Disease, Parkinson's Disease,
20 amyotrophic lateral sclerosis, and Huntington's Disease.

40. The method of claim 37, wherein the
neurological disorder is Alzheimer's Disease.

41. The method of claim 37, wherein the
neurological disorder is Parkinson's Disease.

25 42. The method of claim 37, wherein the
neurological disorder is amyotrophic lateral sclerosis.

43. The method of claim 37, wherein the
neurological disorder is Huntington's Disease.

30 44. The method of claim 37, wherein the compound
is non-immunosuppressive.

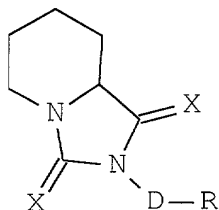
45. The method of claim 37, further comprising
administering an additional neurotrophic factor.

46. The method of claim 45, wherein the additional
neurotrophic factor is selected from the group
35 consisting of neurotrophic growth factor, brain derived

growth factor, glial derived growth factor, ciliary neurotrophic factor, insulin growth factor and active truncated derivatives thereof, acidic fibroblast growth factor, basic fibroblast growth factor, platelet-derived growth factors, neurotrophin-3, and neurotrophin-4/5.

47. A method of stimulating growth of damaged peripheral nerves, comprising:

administering to damaged peripheral nerves an effective amount of a compound to stimulate or promote growth of the damaged peripheral nerves, wherein the compound is of the formula:



where

each X independently is O, S, or NR₂;

R₂ is selected from the group consisting of cyano, nitro, hydrogen, C₁-C₄ alkyl, hydroxy, and C₁-C₄ alkoxy;

D is a direct bond or C₁-C₈ alkyl or alkenyl;

R is hydrogen, or an alicyclic or aromatic, mono-, bi- or tricyclic, carbo- or heterocyclic ring;

wherein R is optionally substituted with one substituent selected from the group consisting of hydrogen, halo, hydroxyl, nitro, trifluoromethyl, C₁-C₆ straight or branched chain alkyl, C₂-C₆ straight or branched chain alkenyl, C₁-C₄ alkoxy, C₂-C₄ alkenyloxy, phenyl, phenoxy, benzyloxy, and amino;

or a pharmaceutically acceptable salt, ester, or solvate thereof.

48. The method of claim 47, wherein the compound

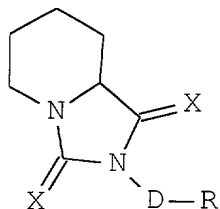
is non-immunosuppressive.

49. The method of claim 47, further comprising administering an additional neurotrophic factor.

50. The method of claim 49, wherein the additional
5 neurotrophic factor is selected from the group consisting of neurotrophic growth factor, brain derived growth factor, glial derived growth factor, ciliary neurotrophic factor, insulin growth factor and active truncated derivatives thereof, acidic fibroblast growth
10 factor, basic fibroblast growth factor, platelet-derived growth factors, neurotrophin-3, and neurotrophin-4/5.

51. A method for promoting neuronal regeneration and growth in animals, comprising:

administering to an animal an effective amount of a
15 compound to promote neuronal regeneration, wherein the compound is of the formula:



where

- each X independently is O, S, or NR₂;
20 R₂ is selected from the group consisting of cyano, nitro, hydrogen, C₁-C₄ alkyl, hydroxy, and C₁-C₄ alkoxy;
D is a direct bond or C₁-C₈ alkyl or alkenyl;
R is hydrogen, or an alicyclic or aromatic,
25 mono-, bi- or tricyclic, carbo- or heterocyclic ring;
wherein R is optionally substituted with one substituent selected from the group consisting of hydrogen, halo, hydroxyl, nitro, trifluoromethyl,
30 C₁-C₆ straight or branched chain alkyl, C₂-C₆ straight or branched chain alkenyl, C₁-C₄ alkoxy, C₂-

C₄ alkenyloxy, phenyl, phenoxy, benzyloxy, and amino;

or a pharmaceutically acceptable salt, ester, or solvate thereof.

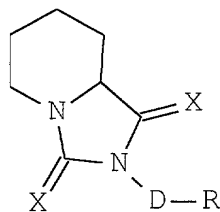
5 52. The method of claim 51, wherein the compound is non-immunosuppressive.

53. The method of claim 51, further comprising administering an additional neurotrophic factor.

10 54. The method of claim 53, wherein the additional neurotrophic factor is selected from the group consisting of neurotrophic growth factor, brain derived growth factor, glial derived growth factor, ciliary neurotrophic factor, insulin growth factor and active truncated derivatives thereof, acidic fibroblast growth factor, basic fibroblast growth factor, platelet-derived growth factors, neurotrophin-3, and neurotrophin-4/5.

55. A method for preventing neurodegeneration in an animal, comprising:

20 administering to an animal an effective amount of a compound to prevent neurodegeneration, wherein the compound is of the formula:



where

25 each X independently is O, S, or NR₂;
R₂ is selected from the group consisting of cyano, nitro, hydrogen, C₁-C₄ alkyl, hydroxy, and C₁-C₄ alkoxy;
D is a direct bond or C₁-C₈ alkyl or alkenyl;
R is hydrogen, or an alicyclic or aromatic, mono-, bi- or tricyclic, carbo- or
30 heterocyclic ring;

wherein R is optionally substituted with one
substituent selected from the group consisting of
hydrogen, halo, hydroxyl, nitro, trifluoromethyl,
C₁-C₆ straight or branched chain alkyl, C₂-C₆
5 straight or branched chain alkenyl, C₁-C₄ alkoxy, C₂-
C₄ alkenyloxy, phenyl, phenoxy, benzyloxy, and
amino;

or a pharmaceutically acceptable salt, ester, or solvate
thereof.

10 56. The method of claim 55, wherein the
neurodegeneration is Alzheimer's Disease.

57. The method of claim 55, wherein the
neurodegeneration is Parkinson's Disease.

15 58. The method of claim 55, wherein the
neurodegeneration is amyotrophic lateral sclerosis.

59. The method of claim 55, wherein the
neurodegeneration is Huntington's Disease.

60. The method of claim 55, wherein the compound
is non-immunosuppressive.

20 61. The method of claim 55, further comprising
administering an additional neurotrophic factor.

62. The method of claim 61, wherein the additional
neurotrophic factor is selected from the group
consisting of neurotrophic growth factor, brain derived
growth factor, glial derived growth factor, ciliary
25 neurotrophic factor, insulin growth factor and active
truncated derivatives thereof, acidic fibroblast growth
factor, basic fibroblast growth factor, platelet-derived
growth factors, neurotrophin-3, and neurotrophin-4/5.